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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,562	05/21/2000	Xavier S. Haurie	A0312/7400/MXS	1261

7590 02/15/2002

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Boston, MA 02210

EXAMINER

PHAN, TRONG Q

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 02/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

NP

# Office Action Summary

Application No.  
09/575,562

Applicant(s)  
FERGUSON ET AL.

Examiner  
TRONG PHAN

Art Unit  
2818



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 14, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 20) ☐ Other: \_\_\_\_\_

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***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show: the mixer 72 (line 9, page 10), the inverter 174 (line 22, page 12); the reference voltage Vref (line 30, page 13), the reference voltages V2, V4, V6, V8 are connected to ground (line 30, page 13), the switches 148, 149 and 150 (line 23, page 20), (the non overlapping four phase clock (line 16, page 27)), the output of the input op amp (line 23, page 27); and the latch stage 804 (line 25, page 33) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Correction is required.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features as recited in claims 5 and 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 1-65 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1-65 are not clearly understood because of the following reasons:  
 the mixer circuit in Fig. 2 is not described; (the QDAC1 to QDACN and the charge sharing network in Fig. 4 are not described); the elements 176 and (P1 + P2 in Fig. 5 is not described); Fig. 6 is not described; all equations in Figs. 7A-C, 8A-D and 12A-C, 14A-C, 19A-C, 33A-C and 34A-C are not clearly understood since the Vref and Q(C1), Q(C2), Q(C3) and Q(C4) are not described; (the master clock and signal lines 19-20, page 16 P4 in Fig. 9 are not described); the switch connected between element 164 and S19 in Fig. 10 is not described; the switching ON/OFF operation of all the switches in each of Figs. 11A-D, 15, 16A-E, 17-18, 19A-C, 20-22, 25, 27 and 30 is not understood since no switching control signal is shown and described; the connection of each of elements 202, 204, 206, 208, S49 and S50 in Fig. 15 is not completely described; the connection of each of elements S43 and S48 in Fig. 16A-E is not completely described; it is not clear how terminals 312 and 314 in Figs. 16B-E are interconnected with each other; elements NC, NAND gates, inverters, switches, capacitors and terminals in Figs. 17, 21-22, 25 are not described as well as numbered; the four arrows on the right side of scrambler 400

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in Fig. 24 are not described; the NAND gates and inverters in Fig. 26 are not described as well as numbered; all capacitors in Fig. 27 are not described as well as numbered; all elements in Figs. 28A-B are not described; all the switches, capacitors and elements from SCF, selectable gain, External CAP and Voltage output in Fig. 30 are not described; elements P1 + bit1.P2, P1 + bit2.P2, P1 + bit3.P2 and P1 + bit4.P2 in Fig. 31 are not described.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5, 10, 13, 19-20, 23, 26, 33 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5 and 13, the one to one relationship between a number of capacitor and a number of bits is vague and indefinite since it is not described and is shown in the drawings.

Claim 10, it is not clear how the one or more analog signals comprises exactly one signal.

Claim 19, no antecedent basis for "the same value".

Claims 20, 23, 26, 33 and 36, no antecedent basis for "the same charge".

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***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-65 are, insofar as understood, rejected under 35 U.S.C. 102(b) as being anticipated by Da Franca et al., 5,008,674.

Da Franca et al., 5,008,674, discloses I Fig. 3 prior Art a ADC comprising: a switched capacitor network receiving an equally-weighted multi-bit digital signal b0 to bw-1 and having a plurality of sub DACs each receiving an associated bit; wherein: when switches CS0, CS1, CSw-1 and S10, S11 and S1w-1 are closed, switches S00, S01 and S0w-1 are opened, all capacitors CP0, CP1 and CPw-1 are commonly connected to reference voltage VR and having charge sharing operating state, then, subsequent to the charge sharing operating state, when switch S0 is closed, the switched capacitor network outputs at least one analog signal indicative of a sum of values of each of bit in the equally-weighted multi-bit digital signal to the common node ND which is connected to the input of a high gain inverting amplifier OA of the switched capacitor filter.

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### ***Double Patenting***

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321<sup>®</sup> may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-65 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 and 30 of copending Application No. 09/575,560. Although the conflicting claims are not identical, they are not patentably distinct from each other because the switched capacitor network as recited in claims 1-65 of the present application are read on the switched capacitor DAC as recited in copending application 09/575,360.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

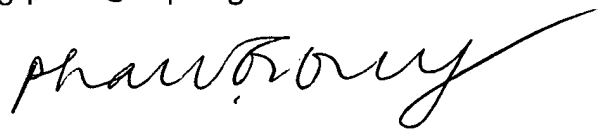
### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Fling et al., 4,591,832, Weigand et al., 4,430,641, Kato et al., 4,580,126, Myers, 5,798,724, Zomorodi, 4,584,568, Law et al., 4,616,212, and Anagnos, 6,150,970.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRONG PHAN whose telephone number is (703) 308-4870 and email address is trong.phan@uspto.gov

A handwritten signature in black ink, appearing to read 'Trong Phan', with a long, sweeping horizontal stroke extending to the right.

**TRONG PHAN  
PRIMARY EXAMINER**

February 12, 2002